AMENDMENTS TO THE SPECIFICATION

Please replace Paragraphs **[0021]**, **[0022]**, **[0024]**, **[0028]**, **[0032]**, and **[0049]** with the following paragraphs, respectively, rewritten in amendment format:

[0021] Referring to Figure 1, a gas powered turbine 10 in accordance with various embodiments is shown. The gas powered combustion turbine 10 may use any appropriate fuel that may be combusted and may expand to move portions of the gas powered turbine 10 to produce power. The gas powered turbine 10 also may include a compressor 12 that forces atmospheric air into the gas powered turbine 10. The gas powered turbine 10 may include several combustion chambers 14 for combusting the fuel in a selected oxidizer. The combusted fuel is used to drive a turbine 15 including turbine blades ~~or fans~~ 16 which are axially displaced in the turbine 15. There are generally a plurality of turbine **[[**fans**]]** blades 16, however, the actual number depends upon various factors, such as the power the gas powered turbine 10 is to produce. Only a single turbine **[[**fan**]]** blade is illustrated for clarity.

[0022] In general, the gas powered turbine 10 ingests atmospheric air, combusts a fuel in it, this produces expanding gases that power the turbine **[[**fans**]]** blades 16. Air may be pulled in and compressed with the compressor 12, which generally includes a plurality of concentric fans which grow progressively smaller along the axial length of the compressor 12. The fans in the compressor 12 may be powered by a single axle. The high pressure air then enters the combustion chambers 14 where the fuel is added and combusted. Once the fuel is combusted, it expands out of the combustion chamber 14 and engages the turbine **[[**fans**]]** blades 16 which, due to aerodynamic and hydrodynamic forces, spins the turbine **[[**fans**]]** blades 16. The gases

form an annulus that spin the turbine **[[**fans**]]** blades 16, which are affixed to a shaft (not shown). Generally, there are at least two turbine **[[**fans**]]** blades 16. One or more of the turbine **[[**fans**]]** blades 16 engage the same shaft that the compressor 12 engages.

[0024] The gas powered turbine 10 may be self-powered since the spinning of the turbine **[[**fans**]]** blades 16 also powers the compressor 12 to compress air for introduction into the combustion chambers 14. Other turbine **[[**fans**]]** blades 16 are affixed to a second shaft 24 which extends from the gas powered turbine 10 to power an external device. After the gases have expanded through the turbine **[[**fans**]]** blades 16, they are expelled out through an exhaust port 26. It will be understood that the gas powered turbine 10 may be used for many different applications such as engines for vehicles and aircraft or for power production in a terrestrially based gas powered turbine 10.

[0028] The fuel that may be combusted in the gas powered turbine 10 may be any appropriate fuel. The fuel may be liquid or gaseous depending upon various considerations and applications. In addition, the fuel may be any appropriate material that may be combusted in a selected oxidizer, such as oxygen and atmospheric air. For example, the fuel may be a hydrocarbon fuel such as methane, kerosene, synthesis gas (selected mixtures of hydrogen and carbon monoxide), and other appropriate hydrocarbon fuels. In addition, the fuel may be hydrogen or other appropriate fuels. The hydrogen may be formed in any appropriate manner and provided to the gas powered turbine 10 to combust in the oxidizer to power the turbine **[[**fans**]]** blades 16.

[0032] Air that exits the heat exchange tubes 48 is entrained with fuel injected from an injector port 60 in the main injector 52 and this fuel then combusts in the main

combustion section 34. The injectors 60 may be any appropriate injector or injector element. For example, the injector 60 may be impinging injectors, such as those illustrated and described in U.S. Patent Application No. 10/397,394, entitled "A CATALYTIC COMBUSTOR AND METHOD FOR SUBSTANTIALLY ELIMINATING NITROUS OXIDE EMISSIONS", and commonly assigned and incorporated herein by reference. A further injector element that may be injector 60 includes the injector element described in U.S. Patent Application No. 10/729,679 (Attorney Docket No. 7784-000644), entitled "A Fuel Injection Method and Apparatus for a Combustor", and commonly assigned and incorporated herein by reference. Therefore, the injector 60 may be any appropriate injector and the above are merely examples of injectors that may be used in the combustor 14. The main combustion section 34 directs the expanding gases of the combusted fuel to engage the turbine **[[**fans**]]** blades 16 so that the expanded gases may power the turbine **[[**fans**]]** blades 16.

[0049] The temperature of the air, after the additional fuel has been combusted from the main injector 52, may be about 1315° C to about 1537° C (about 2400° F and about 2800° F). Preferably, the temperature, however, is not more than about 1426° C (about 2600° F). Different fuel to air ratios may be used to control the temperature in the main combustion section 34. The main combustion section 34 directs the expanding gases into a transition tube (shown in part extending from the combustion section 34) so that it engages the turbine **[[**fans**]]** blades 16 in the turbine area 15 at an appropriate cross sectional flow shape.